

**Abstract**

The invention relates to an electrolysis device for halogen gas production from an aqueous alkali halide solution in several plate-type electrolysis cells stacked and arranged side by side, with electrical contacts, each of the cells with a housing consisting of two half-shells made of electrically conductive material, said housing being equipped with devices for feeding electrolytic current and the electrolysis plant reactants and devices for discharging electrolytic current and discharging the electrolysis products, with anodic electrode, cathodic electrode and a membrane arranged therebetween, built-in components being fitted in at least one of the two half-shells and permitting a defined increase in the liquid level and thus minimising the remaining gas volume accordingly.

The built-in components are arranged in such a manner that they form an internal trough parallel to the said membrane and arranged horizontally, an interspace thus being provided between the trough and the membrane and an interspace between the trough and the electrolysis chamber, a part of which is located above the membrane, said trough having at least one opening communicating with the interspace between said trough and the upper side of the electrolytic chamber, and at least one outlet.

(Drawing to be published with abstract: Figure 1)